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Vol. 96

September 2019

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CONTENTS

GENERAL ARTICLES :

Study on Morphological Traits in Indigenous <i>Jallikattu</i> Bulls of Tamil Nadu R. Priyadharsini, A. Gopinathan, S.M.K. Karthickeyan and P.N. Richard Jagatheesan	... 09
Epitopes Prediction According to Glycoprotein Encoding Gene of Rabies Virus Local Isolates as Vaccine Candidate against Circulating Rabies Virus in Indonesia JolaRahmahani, Suwarno and Fedik Abdul Rantam	... 14
Estimates of Genetic Parameters of Semen Traits in Crossbred Bulls Gopinathan, S.N. Sivaselvam, S.M.K. Karthickeyan and R. Venkataraman	... 17
Commercial Cuts in Etawa Goat Fed with Water Spinach Pufa and Mineral Mixture Licks Kadek Rachmawati, Romziah Sidik, Vivi Virgianty, Koesnoto Supranianondo, Tri Bhawono Dadi and Herinda Pertiwi	... 20
Occurance of Ectoparasites in Mud Crab (<i>Scylla serrata</i>) and White Shrimp (<i>Litopenaeus vannamei</i>) Widyo Witular, Kismiyati and Putri Desi Wulansari	... 23
Antiviral Activity of Ethanolic Extract of Srikaya Seeds (<i>Annona squamosa</i> L.) Against Avian InfluenzaVirus Maya Nurwartanti Yunita, Adi Prijo Raharjo, Prima Ayu Wibawati and Bodhi Agustono	... 26
Identification of <i>Aeromonas hydrophila</i> Outer Membrane Protein as a Potential Vaccine Candidate for Ulcer Disease M. Gandul Atik Yuliani, Anwar Ma'ruf, Ratna Damayanti and Diyantoro	... 29
Diatom Naviculoid and Nitzschoid Composition in the Sulfur Mountains Watershed East Java, Indonesia Suciyono, A.A. Sabil, E. D. Masithah, D.D. Nindarwi, M.H. Azhar and M.F.Ulkhaq	... 31
Anti Early Embryonic Protein (EEP) for Pregnancy Test by Microtiter Strip in Dairy Cows Abdul Samik and Erma Safitri	... 37
Enhancement of Broiler Chicken Growth by Laserpuncture Treatment Lilian Soekwanto, Chairul Anwar and Rimayanti	... 40
Protective Effect of Mycotoxin Binders on Ovarian Gestation Mice Exposed by Zearalenone Ragil Angga Prastiya, Abdul Samik, M. Thohawi Elziyad Purnama and Amung Logam Saputro	... 44
Detection of Antibiotic Residue in Broiler Chicken Meat at Traditional Market in Surabaya City, Indonesia Shelly Wulandari, Diyantoro and OkySetyo Widodo	... 47
The Potency of <i>Hylocereus polyrhizus</i> Peel Extract as Protector on Lead Acetate-Induced Testicular Toxicity in Mice E. Wulandari, R. I'tishom R and S.A. Sudjarwo	... 49
Probiotic Utilization in Megacolon Dog : A Case Report Tri BhawonoDadi, Ira Sari Yudaniayanti, WiwikMisacoYuniarti, NUSDiantoTriakoso, BoediSetiawan, E. Djoko Poetranto, MiyayuSonetaSofyan and Herinda Pertiwi	... 51
Honey as an Alternative to Stem Cells Therapy for Degenerated Rat Testis Due to Malnutrition Erma Safitri, Thomas V. Widiyatno, Willy Sandhika and R. Heru Prasetyo	... 53

CLINICAL AND FIELD ARTICLES :

Pathology of Selenite Induced Cataract in Rats

S.Shiyamala, S.Ramesh, S.Hemalatha, C.Ramani, V.Ranganathan, K.Vijayarani,
S.Ramesh and Ganne Venkata Sudhakar Rao ... 56

Successful Management of Recurrent Cervico Vaginal Prolapse in a Jersey Crossbred Cow by Caslick's Operation

S. Rangasamy, T. Sarath, K. Logapriya, Aparna Gopinathan and J. Umamageswari ... 57

Dystocia Due to Hydrocephalus Fetus in a Queen Cat

S. Rangasamy, J.Umamageswari, Aparna Gopinathan and D. Gopikrishnan ... 59

Dystocia Due to Ringwomb in a Non Descript Doe

S. Rangasamy, J.Umamageswari, Aparna Gopinathan and D. Gopikrishnan ... 61

Congenital Polycystic Kidney Disease in a Domestic Short Haired Cat- A Rare Case

P.Ramesh, D.Sumathi, K.Jeyaraja, C.Jayanthi and M.G.Jayathangaraj ... 63

Megaesophagus in Dogs – A Case Study

P.Ramesh, S.Kavitha, K.Jeyaraja, D.Chandrasekaran, S.Arun Prasad and M.G.Jayathangaraj ... 65

Therapeutic Management of Generalized Tetanus in an Adult Dog Due to Nail Bed Infection

S. Saravanan, M. Sasikala, K.M. Palanivel and G. Vijaya Kumar ... 67

Successful Management of Ulcerative Pododermatitis in Rabbits with Sulfacetamide Dry Dusting Powder

D.Divyalakshmi, N. Kumarvelu, Thanga. Thamil Vanan and P.Tensingh Gnanaraj ... 69

Clinical Management of Oedematous Emphysema in HF Bull: A Case Report

Vinod Haribhau Shende, Ajeet Singh, Anil Korade, S. Hanumantrao. Sontakke,
Hemant Dashrath Kadam and Jayant Ramchandra Khadse ... 70

Ultrasonographic Evaluation of Gall Bladder Affections in Dogs - A Retrospective Study

D.Sumathi, P.Ramesh, K.Jeyaraja, M.Ranjith Kumar and M.G.Jayathangaraj ... 72

Osteodystrophia Fibrosa in a Kathiyawari Colt - A Case Report

R. Eazhisai, B. Gowri, A. Abinaya and S. Hamsa Yamini ... 74

Concurrent Clinical Coccidiosis and Subclinical Babesiosis in an Adult Cattle

S. Saravanan, T. Mohanapriya, K.K. PonnuSwamy, P. A. Enbavelan,
R.C. SundaraRajan and R. Ramprabhu ... 76

Diagnosis of Lymphoid Leucosis in an Organised Aseel Farm

A.Varun, C. Yogesh, P.V.Sangeetha, S.Ezhilvalavan, M. Thangapandiyan, C.Pandian and A.V.Omprakash ... 78

Kaempferia galanga L. Inhibiting Effect on Vascular Endothelial Growth Factor (VEGF) and Cyclooxygenase-2 (Cox-2) Expression on Endothelium of Chorioallantoic Membrane

Iwan Sahrial Hamid, Juni Ekowati and Muhammad Thohawi Elziyad Purnama ... 80

Pathology of Snake Envenomation in a Cat

M.S.Sreelakshmi, Mammen, J. Abraham, N.D. Nair, B.Abeena and R.B.Vishnurahav ... 82

Black Quarter in a Crossbred Bull

M.S. Sreelakshmi, Ajith Jacob George, Mammen J. Abraham and N.Divakaran Nair ... 84

Author Index ... 87



Indian Vet. J., September 2019, 96 (09) : 51 - 53

Probiotic Utilization in Megacolon Dog : A Case Report

Tri BhawonoDadi¹, Ira Sari Yudaniayanti, WiwikMisacoYuniarti, NusdiantoTriakoso, BoediSetiawan,
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Abstract

A five year old male beagel dog weighing 15 kg was presented with history of constipation, frequent vomiting after feeding, and abdominal pain for past 3 days to Veterinary Teaching Hospital of Airlangga University, Surabaya. Based on hematological analysis, normal X-ray

and contrast X-rayradiography, the dog was diagnosed with megacolon due to hard faeces accumulation in the colon. It was treated with fluid therapy using NaCl, combined with ranitidine, antasids, enrofloxacycin, and probiotic contained *Lactobacillus acidophilus*, *Bifidobacterium longum*, *Streptococcus thermophilus* (1×10^9 CFU/g per day). This treatment resulted good progress everyday, the dog was totally back

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to the normal condition after seven days.

Key words: Megacolon, Constipation, Probiotic, dog

Constipation in megacolon case is intractable constipation characterized by inability to evacuate the mass of dry, hard feces; impaction extending from the rectum to the ileocolic valve can result in pathological condition of hypomotility and dilatation of the large intestine resulting in constipation and obstipation. Usually this condition is treated by laxative drugs, enema and surgery to remove the mass inside colon, however probiotic utilization to cure such cases is documented in this case.

Case History and Observations

A five years old male beagle weighing 15 kg not-neutered male was presented to the Airlangga University Veterinary Teaching Hospital with the history of not defecating for three days and vomiting shortly after given feed. Physical examination revealed no sign of anemia, body temperature was normal (38.5°C), vomition of gastric juice with yellow color, abdominal palpation confirmed large hard feces in colon. X-ray examination with bariumsulfate (Fig 1) showed large faecal mass in the colon. The intestine was filled with gas, thickening of intestinal wall as well as colon, however no evidence of foreign body in stomach or intestine was observed.

Hematology and biochemical examination showed high level of leucocyte ($27.5 \times 10^9/L$) and monocyte (25.5%) and blood urea nitrogen/BUN (59.7mg/dl). However, the level of BUN

was slightly increased due to dehydration due to delayed transportation of four hours from owner's home to the hospital.

Treatment and Discussion

Enema was given using glycerin 10 ml continued with fluid therapy normal saline 400 ml intravenous route on the first day combined with ranitidine 30 mg (2mg/Kg Body weight), antacids 5 ml (each ml contains of dimethylpolysiloxane 80 mg – aluminium hydroxide 200 mg – magnesium hydroxide 200 mg) at every 8 hours *ante coenam* and 60 mg enrofloxacin every 12 hours. Probiotics in combination of *Lactobacillus acidophilus*, *Bifidobacterium longum*, *Streptococcus thermophilus* (1×10^9 CFU/g) was given for 2 days every 24 hours. Surgery option was not considered since the dog was able defecate liquid feces. The probiotic has been given to increase colon motility on day 2 after the enema therapy. The hard fecal mass successfully voided on the next day, the patient was able to defecate normally after seven days of treatment and recovered uneventfully.

In this case the probiotic treatment was able to accelerate intestinal mobility by decreasing methane production (Pathasarathy *et al.* 2016) and (Furnari *et al.* 2012). Various *Lactobacillus sp.* and *Bifidobacterium sp.* Strains could improve gut transit time, stool frequency and consistency, and flatulence (Dimidi *et al.* 2014). Furthermore, it has been shown to interact with the gut-brain axis in rats through the modulation of afferent sensory nerves that influence gut motility (Kunze *et al.* 2009; Dimidi, *et al.* 2017).



Fig I. Megacolon with hard faeces on day 1st



Fig II. Normal colon after treatment day 7th

Summary

The dog was diagnosed with megacolon due to obstipation which was treated with Probiotics containing *Lactobacillus acidophilus*, *Bifidobacterium longum*, *Streptococcus thermophilus* a potential supportive drugs to accelerate intestinal transit by decreasing methane production.

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